

Aviation News

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50 CENTS

Air Traffic Soaring to New Highs
Reports issued by airlines and Civil Aeronautics Board show phenomenal gains in all traffic categories, with some increases 100 percent over last year.



Big Stores Survey Aircraft Plants
Sears, Ward's and Penny chains are interviewing all major aviation manufacturers before placing orders for post-war delivery of hardware.



Wooden Plane Development Lagging
Although the U. S. eventually can match foreign skill in non-metal aircraft production, it won't be in time to win this war, commentator says.



Congress to Get Manpower Problem
Washington officialdom views industry's shortage of workers with alarm but schedules action about the time Congress will return to Capitol Hill.



Renegotiation Amendments Drawn
Proposed changes in law to be considered by House Ways and Means subcommittee would permit contractors to retain sufficient reserves.



"V" Loan Financing Gains Favor
Consolidated-Vultee, Bendix, Lockheed-Vega, Bell and Cessna report negotiations for funds with other firms planning similar action.



More Foreign Routes Sought
American Airlines asks CAB for London service and Northwest files petition for Calcutta. Other companies seek feeder operations throughout the U. S.



Guy Vaughan, president of Curtiss-Wright Corporation, who is leading his company's successful campaign to step up output at the Lockland, Ohio, engine plant, despite Senator Truman's statement that government operation may be required. The plant's production will show big gains over July.

Super Human Vision with "THE INVISIBLE CREW"

ELECTRONIC "vision" that penetrates through fog or cloud ... superhuman range of vision and knowing ... shows us what Bendix' Radar developments give to the pilot of a U.S. fighting plane!

And Bendix gives him other "senses" ... third-dimensional "senses." Pioneer! Instruments fit his horizon for him ... show them a no horizon. They set his course, and hold a for him ... show him his altitude, speed, position. First! Instruments supply his weather sense. That man and instant perception which Nature gives us a bird ... these

Visible Crewmen give to earthling man. Together they have conquered the hazards of blind flying!

Today that means, above all else, constant guidance for our boys on the battle line. That constant came from the many thousand Bendix workers, under inspired engineers ... the science that pierces today's battle smoke ... can also serve to penetrate the veil of tomorrow's greater opposition. "The Invisible Crew" of Bendix will help us overcome the age-old handicap of "flying blind" ... into the future ... as into the fog.

SOME FAMOUS MEMBERS OF

PIONEER! Flight Instruments, BENDIX' RADAR ... direction, Detection, Communication Equipment. **SENDER!** ... Aircraft Engines, Controls, **SENSE!** ... Automatic Ignition, **SENSE!** **PROTECTOR!** ... Aircraft Controls, Landing Gear, **SENSE!** Automatic Turbines, **SENSE!** ... Aircraft Engines, Operational Auditions, **SENSE!** ... Weather Instruments, **SENSE!** **WARNING!** ... Signal, Controls

THE INVISIBLE CREW
 BENDIX
 CORPORATION

Bendix
 CORPORATION

SALES OFFICES IN ALL MAJOR CITIES AND THROUGHOUT THE WORLD
 BENDIX CORPORATION, NEW BRUNSWICK, N.J.

BACK OUR OWN SOPS ... BUT WAS SONGS

And Beards gives him other "senses" – blind, dismembered senses. Pioneer's Instruments let his hands for him – where there is no touch. They set his course, and hold it for him – show him his altitude, speed, position. First Instruments supply his weather sense. That man and woman perceptors which Nature gives on a bird – they

Today that means, above all else, constant pressure for our boys on the battle line. The common enemy unites the many thousand Banders' leaders, under inspired regimes: but the science that percees today's battle smoke . . . can also serve to penetrate the veil of tomorrow's greater opportunities. "The Invisible Crew" of Banders will help to overcome the age old handicaps of "flying blind" . . . into the future . . . into the fog.

THE AVIATION NEWS
Washington Observer

MANPOWER—This situation is still unaltered and there appears little hope for any immediate relief. This does not mean that industry does not have sympathetic people in government, because it does, but there are so many factors involved, including political problems, that progress is slow.

RENEGOTIATION—Proposals for contract renegotiation are pending before Congress and as soon as the legislators get back into session there will be other proposals which will give aircraft manufacturers and other war contractors some hope for post war conversion funds. There is plenty of opposition, however.

CONTRACT TERMINATION—There is an increasing understanding of this situation in government. This does not mean that the industry is safe, but it does mean that more people in government are interested in this phase.

FIGHTER ARMAMENT—You can look for some startling changes in the armament on our fighter planes, making them even more deadly. Machine guns, in many instances, are giving way to cannons—and maybe to homethrusts.

There is great discouragement in official Washington over the West Coast manpower situation. Responsible officials who have been on the West Coast recently contend there is a laxness in management, particularly in the ship-

yards, which is contributing to the difficulties of the problem. They further contend that many shipyards are over-stuffed. Shipyard wages, which are above the general standard, have attracted employees from the shipyards and the shipyards are holding them. These officials say, too, that they found a distinct lack of unity on the part of a large number of shipyard workers.

For example, one high government official, recently on the West Coast, actually stambled on three dead grooves in one shipyard during working hours and a short time later, taking a look in the cabin of an airplane, saw three dead birds. He found two workers, a man and woman, killing time.

It might be well to recall the statement in this space last week that top WPS officials, including Executive Vice-Chairman Charles E. Wilson, favor an over-all plant incentive program as the solution. There is a definite belief that production can be substantially increased with existing personnel. Keep an eye on the incentive payment plans. It looks as though they are on the way.

An official release was expected over the week-end from WPB Chairman Donald Nelson which will show that our combat plane production exceeds by an unexpected margin the number of aircraft lost in battle, accident and obsolescence. At the same time, Nelson was expected to disclose the aircraft which have top Army preference and a survey of the types on which production will be concentrated during the coming months.

Problems in glider operation are receiving increasing attention from some aeronautical engineering experts, which may indicate a trend in this controversial field. For example, one of the greatest difficulties with gliders has been the constant vigilance required of the glider pilot to maintain his craft in a proper position with respect to the tug. You can look for developments in this connection since some of the best awards in aviation are given at glider.



Bendis
AVIATION CORPORATION

[illegible]

BACK UP OUR BOTS, BUT WE'VE BOMBED

The best analysis of the West Coast situation

MAKE THEM MORE AND MORE AUTOMATIC



TO INCREASE THEIR
FIGHTING POWER ★ ★ ★

White-Rodgers automatic temperature modulation equipment relieves pilots for greater concentration on fighting power by providing completely automatic control of:

1. Engine cowl flaps (both air and liquid cooled).
2. Oil cooler shutters or flaps.
3. Cabin temperature (both super-charged and normal).
4. Carburetor air temperature.

Upon request, engineering data will be furnished to manufacturers requiring controls for the above or other temperature control applications.

WHITE-RODGERS ELECTRIC CO.

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Curtiss-Wright's Lockland Plant To Report Big Gains This Month

Officials believe low point of July will be far exceeded in August, but ask three months for fair trial.

Despite widely-publicized reports of new declines in engine production at the Wright Aeronautical Corp. plant at Lockland, Ohio, and the Army-Truman Committee threat to take over the plant unless the management set-up is improved, the production at Lockland this month will be far above July's disappointing figure.

✓ Fertile Lag, But—Officials of Curtiss-Wright, of which Wright Aeronautical is a subsidiary, are quite willing to agree with their accusers that the production lag was terrific. On the other hand, they are now ready to point to a substantial increase for this month and confidently expect further increases in the months to come.

✓ Better Supervision—Gay W. Vaughan, President of Curtiss-Wright, conceded, as charged by the Truman Committee, that managerial and supervisory personnel was thinly spread in an attempt to meet production schedules. Vaughan points out, however, that the managerial problem has been attacked by the company long since and he believes that current production figures will prove his point.

✓ Reorganization—This does not mean that the plant is completely recovered, but all reports indicate that Lockland is definitely on the mend. That Lockland will be back on its feet in the 30 days given by the Truman Committee and the Army is a matter of doubt. His answer would like to have 90 days and by that time believe they can show a healthy plant.

✓ Under Same Management—The attitude of the War Production Board unquestionably will be set to dutch management of WFB can assist it in any way. Any change such as threatened by an Army occupation would result, in WFB's opinion, in another drop in production. At the same time, it was

pointed out, there is no assurance that any new management which might be moved in under occupation would produce any better.

✓ Restored Confidence—Several of the nation's top-flight production men have visited Lockland recently, not so much to offer suggestions for production but rather to restore the management's confidence in itself, a confidence which admittedly was badly shaken as a result of criticism and misstatement.

✓ Why the Slump—The Curtiss-Wright management explained they had no criticism of the work and objectives of the Truman Committee but pointed out that there was a general tightening up all along the line which probably resulted in a lessening over backward attitude and subsequent production slump.

✓ Mass Output Demand—Unofficially there are some members of the Truman Committee who are hostile and belligerent on the matter, although that does not apply to the entire committee, nor to the chair-

man, Senator Truman. It was understood, however, that some members who held this superannuity personae had been dislodged also but believed that while Curtiss-Wright had done a good job prior to and during the early stages of the war, the company had fallen down in many respects under mass production.

✓ Tailored Approach—Some members of the committee were said to be of the opinion that Curtiss-Wright did its best work on custom building, so-called, and that this custom-building attitude had been carried over into mass production with unfavorable results.

✓ Righting Wrongs—In view of this, the Committee members apparently do not believe it is as the Wright Aeronautical can right its admitted wrongs within the next 30 days. Following this through, the possibility still remains that the Army might take over. This procedure which seemed almost certain at the conclusion of hearing in Lockland is now considerably less certain in view of this month's production effort at the Ohio plant.

✓ Who Could Be Better?—Most civilian government production experts feel that any shift in management would cause a disruption of production, without any assurance of immediate betterment.

Rocket Engineers Set Up Company

Jet propulsion experts file incorporation papers in California.

State corporation records of California recently filed by the new Aerojet Engineering Corp. of Pasadena, show some of the nation's leading jet propulsion experts on the board of directors.

✓ Rocket Genius—Dr. Frank J. Malina, young assistant professor of aeronautics at California Institute of Technology, who has been the guiding spirit of Cal. Tech's rocket research laboratory within the past decade, and Dr. Theodore von Karman, Cal. Tech's internationally famous director of aeronautics, heads the list of directors.



NEW LIBERATOR NOSE

First flight picture of the Liberator's new American electric gas turbine, installed at Cessna's Pt. Worth plant. The unsynchronized 35-cylinder machine gives over the bomber a total of 12 guns.

► **Management** — The Directorate also includes Martin Samuels, Edward F. Foreman, and P. Lewis, L. H. Hermsen and W. T. Cunningham.

Aerogel officials are Major Andrew G. Haley, president, and John W. Parsons, vice-president. Parsons, an explosive expert, publicly prominent as a "bomb expert" consultant for the Los Angeles Police Dept. and District Attorney, has worked

closely with Malina since 1951. ► **Pre-War Tests** — During the pre-war period in which Cal Tech made public the general purpose of its rocket research department, Dr. Malina and his associates built elaborate apparatus to test rapidly developing rocket flight theories, and extended jet propulsion research with original designs of both constant-flow and explosive impulse rocket motors.

new type Balla-Royer aircraft engine, featuring a two-speed, two-stage supercharger.

► **Combined Design** — The engine is being used to power the new North American P-51 Mustang fighter. Development of the supercharger was done jointly by British and Packard engineers with the cooperation of the Army Air Forces George T. Christopher, Packard president, and that is effect, the new engine takes air warfairs nearly two miles higher and that horsepower is stepped up to more than 1,500. Previous models had a two-speed, single stage supercharger.

► **Cochran and Love** — The Women's Flying Training Detachment under Jacqueline Cochran, and the Women's Auxiliary Flying Squadron directed by Miss Nancy Harbois Love, form the WASP's who fly for the ATC and other divisions of the AAF. Miss Love is now executive for WASP flying operations, ATC, Cincinnati, Ohio, while Miss Cochran has become Director of Women Pilots, Headquarters AAF, Washington, D.C.



The British Minister of Production in this illustration reveals that Great Britain is producing every month four times the number of heavy bombers built in the corresponding month last year.

Orville Wright Studies Gliders

Developing device to aid towed craft, inventor tells friends

Orville Wright, co-inventor of the airplane and first man to fly it, originally flew gliders with his brother William. He is now trying to develop a device to aid in towed glider attempts. Today more than 40 years after the surviving member of the famous brother-inventor team is again working on development relative to gliders.

► **New Development** — Orville Wright, 61, says he is now developing a new glider, which he says will give new significance to the unpowered aircraft, both in the military and the post-war commercial picture.

► **Wright Served** — Interviewed on his 72nd birthday, Aug. 19, the white-haired inventor declined to discuss details of his new project, which he is developing independently in his secluded little laboratory in Dayton. It was there that the Wrights developed the first wing design, one of the first engine cowings, and other aviation contributions not generally known to the world.

► **Added Invention** — Besides his aircraft, Orville is also working on a new invention, which he is currently on another invention of a mechanical nature, which has no relation to aviation, he disclosed.

Conduct Tests in New NACA Seaplane Tank

Scientists report progress in study and elimination of "porpoising"

Hydrodynamic tests of seaplane floats and flying boat hulls, highly confidential because of their value in the war effort, are being conducted in a new 1,600-ft. tank at Langley Field, Va., by the National Advisory Committee for Aeronautics.

► **Deep Secret** — So secret are the studies that the existence of the tank itself has not been publicized,

despite the fact that it is the most modern testing device of its kind in the world.

► **"Porpoising"** — The new tank parallels NACA's tank No. 1, a 2,000-ft. long line of water in which similar tests have been conducted for more than a decade. Fitted in the best method known to science, tank No. 2 lately has been the scene of research on causes of "porpoising," the pilot's term for an unstable condition that has been known to damage and even destroy seaplanes in takeoff and landing.

► **Under Control** — NACA engineers are hopeful the characteristics can be eliminated. Progress already made, they report, has so narrowed the circumstances under which it occurs and defined the factors which cause it that pilots, indicated in the hands of these factors, can avoid it entirely or restrain it within a margin of safety.

► **Made-In-Order Sea** — A bigger type wave mechanism in tank No. 2 permits the simulation of any type of sea surface. It has proved so effective that another is being installed in tank No. 1. These machines duplicate conditions on the actual sea according to wind, creating a chop or a swell by setting up a short or a long wave length.

► **Seals Models** — Models used in the tests are built to scale in all characteristics — size, weight, and mass distribution — so that both static and dynamic properties are retained. The rails that carry the overhead carriage from which the models are supported for the length of their "run" conform to the earth's curva-

ture, to assure no deviation in the depth of the model in the water. This is also true of the side rails supporting the towing carriage in tank No. 1.

► **Shorter But Faster** — The new tank is shorter because its equipment permits faster acceleration and acceleration. In the older, about 1,000 ft. as used to accelerate, another 1,000 to maintain speed for the test, and 300 to decelerate. The overhead support system in the new tank also permits improved methods of recording.

► **Bank Work** — NACA technicians are working three shifts a day at tank No. 1. Tank No. 2 is on a two-shift basis, but it probably would be a three-shift operation too, according to reports, if the manpower shortage had not reduced the availability of technical men equipped to do the job.

Convair Launches Drive for Patents

Firm interested in all ideas, cracks up or not, of its staff

Prospect of a battle among aircraft manufacturers for new patents is indicated in Consolidated Vultee Aircraft Corporation's announcement of a nation-wide acceptance of patentable ideas beyond those of its employees.

► **Patent Engineers** — Vultee is appointing "patent engineers" in all plants in 13 continental offices. Most important of the new patent departments is that of the Vultee Field Division at Downey, Calif., near Los Angeles, centered in an area more heavily populated by aircraft engineers and inventors than any other section of the United States.

► **Heads Paid Dept.** — D. F. Moore, Vultee Division engineer, has been relieved of all other duties to head the division's patent department.

To optimize the inventive ability of its employees, Consolidated Vultee has put in the war requirement, not new in industry, that employees creating noteworthy service men invention agreements will be given company first consideration of their ideas.

► **Percentage Basis** — The agreement guarantees the employee \$10 upon company acceptance of an idea; \$40 when patent application is made; \$50 when the patent is obtained; and the balance of 30 percent of the first \$1,000 raised from the patent, 20 percent of the second \$1,000, and 20 percent of additional money gained during the life of the patent.

Sears, Ward and Penney Stores Quiz Industry on Post-War Goods

Big chain store operators interviewing all major aircraft and accessories manufacturers to speed peacetime orders.

By SCHOLAR RANGS

Chain stores with nation-wide billion dollar marketing outlets may begin next spring to place orders with the nation's aircraft factories for household products the factories can begin producing the moment war contracts terminate.

► **Plans to Hardware** — Sears, Roebuck and Company, Montgomery Ward and Company, J. C. Penney Company and similar buying organizations are in the midst of an intensive, competitive survey of all major air frame and aircraft accessory industries that will be able to turn their manpower and machines into general hardware production after the war.

► **Post-War Products** — Chain store executives in groups and individually are telling aircraft factories what they want to stock their post-war shelves, and are learning from aircraft post-war planners what the factories will be best able to produce.

California aircraft factories, by virtue of their number and size, currently are conferring with a parade of prospective buyers.

► **Spring Buying '45** — One Los Angeles aircraft parts plant president told Aviation News that officials of a national chain store doing a heavy mail order business is preparing to begin post-war requisitioning in the spring or summer of 1944.

"There are no big aircraft firms that have not been contacted," said a representative of one chain store group.

Factors in the length of the West Coast are being visited as rapidly as possible by buying groups that already have had post-war produc-

tion conferences with Boeing in Seattle and Consolidated Vultee in San Diego.

► **Chain Store** — The West Coast manager of one chain store identified that he is competing with all merchandising organizations such as he, which are canvassing the aircraft industry to learn the production possibilities of the hundreds of new war-need manufacturing firms that will be able to turn immediately to the production of small "hard goods" articles when the war ends.

Speaking for the day firm, he said, "Our own survey is in the conventional stages. So far we have made no tie-ups. We have not as data for placing orders. The war's outcome decides that at this time."

► **What Buyers Want** — Vacuum cleaners, kitchenware, washing machines, rubber goods, toys, sporting goods, cameras and novelties are among the things the buyers want, and the production of which may prove "job orders" for many aircraft plants when war contracts dwindle.

Moderately, and without deterring from their all-out war effort, major aircraft factories have set up post-war planning departments that are considering the outlines of buying groups, and are even showing prototypes of household articles they will be prepared to manufacture.

New Rolls Engine

Packard's improved model has two-speed, two stage supercharger.

Packard Motor Car Co. has disclosed that it has been in volume production for several months on a

Director Cites Peril to WTS

Stewart fears services may see coming training contracts next year.

A strong plea to continue civil aviation training of wartime pilots was made by R. McLean Stewart in an address before the Midwest Global Air Conference in Minneapolis. Stewart, executive director of CAA-WTS, and he feared the Army and Navy had enough facilities for training at their disposal and by July of 1944 might no longer need CAA, which represents the last vestige of civil aviation.

► **Post-War Training** — In order that civil aviation may exist for post-war training of pilots, Mr. Stewart said steps must be taken by Congress to assure its continuance into peacetime.

► **Courses** — At present WTS provides three courses: (1) Army Reserve, about 200 to terminate; (2) Naval Aviation Cadets, and (3) 10-hour flight instruction program for the Army.

► **Assigned to Train** — Latest weekly reports show 27,746 men assigned to flight training consisting of 14,891 in the flight instruction course, 10,118 in the Army Reserve course, and 2,737 in the program for the Navy. Flight and ground school contractors are giving employment to 9,953 persons, and airplanes in use by contractors aggregate 6,973.

Army's Women Pilots Are Labeled Wasps

Flyers train civilian women for peace, officials say

The heretofore nameless group of women pilots of the AAF and the WASP has been given a title by Gen. Arnold: Women's Air Force Service Pilots, shortened to WASP.

Navy Shuffles Its Air Officers, But None Joins Chiefs of Staff

Promotion of Adm. McCain and transfer of some officers to operations seen as only a step in right direction.

Full-throttle air power men have adopted a wait-and-see attitude on the Navy's widely-heralded organizational change which creates the post of Deputy Chief of Naval Operations (Aur) and transfers functions of five divisions of the Bureau of Aeronautics which are related to naval operations to the Office of the Chief of Naval Operations.

Navy Staff.—While the move places a Vice-Admiral, John S. McCain, an air officer, on the Operations staff, realistic aviators were inclined to view the change as a mere transfer of Naval aeronautical functions which gives Naval air power little if any more place in the Navy staff.

Separate Air Force.—The program was said to have been first considered more than a year ago. If it was not put into effect until now it is not known, but one reason advanced was that the move is the Navy's answer to the increasing volume of crisis for an independent air force.

Bureaucratic Air.—The Bureau of Aeronautics, it was explained, was organized originally to act as a materiel bureau. Since the growth of air power, its activities have spread into the administrative field. Navy chiefs think that a more compact organization, as they described it, would function more efficiently.

Scrambles.—Some suggested, however, that Naval aviation functions are so scattered under the new set-up that it is difficult to ferret them out and that possibly deeper Navy men had in mind an organization which could not be readily lifted out of the whole in the event of the creation of an independent air force with possibly a fleet arm.

Functions.—The Bureau of Aeronautics is stripped of functions relating to operations. These involve Planning, Personnel, Training, Flight and Air Information Divisions. Functions of these divisions not related to operations, however, remain with the Bureau of Aeronautics. The post of Assistant Division of Naval Operations will be absorbed in the new division, with the exception of the Naval Air Transport Service which will continue its functions as a separate division under the Deputy Chief of

Naval Operations (Aur)—Vice Adm. McCain.

Marines.—The director of Marine Corps Aviation and appropriate Marine Corps offices in the Bureau of Aeronautics are assigned directly to the Deputy Chief of Naval Operations (Aur).

Naval Procurement.—Rear Adm. DeWitt C. Barnaby, who heads the Bureau of Aeronautics will concern himself solely with procurement and maintenance of Naval aircraft. In addition, the Photography Division goes to the bureau. The Materiel Division in the bureau is subdivided into procurement, engineering and production.

Keen Predicts.—In announcing the new set-up, Secretary Knox observed that "we think this will systematize and we hope it will intensify air warfare. We now have a bureau to supply the planes and a department to operate them." He added that he thought the move would "increase the responsibility and autonomy of the aeronautics organization in procuring the finest aircraft types, perfecting the training and supply systems and other administrative subjects so vitally important to the operations of the war."

Incomplete Representation.—Aviation aviators admit that the change places

a vice-admiral in command of all aviation activities and gives him a place with other operations chiefs who plan battles, approve and evaluate possibilities of our aircraft and of enemy planes as demonstrated in combat, and select trainees for combat and disseminate news from combat. They point out, however, that the Navy air arm still does not have a chair at the combined chiefs-of-staff table where the Army is represented by a four-star general. The change, in a word, did not come up to their hopes.

Encouraging Step.—Middle-of-the-road aviators men, on the other hand, were glad to make progress, if only a step at a time, and they regard the creation of the post of Deputy Chief of Operations (Aur) as a step.

Navy's Air Arm Marks 30th Year

Adm. Dewey signed original report recommending aviation unit.

The air arm of the Navy had its inception just 30 years ago—August 30, 1913.

On that day, Adm. George Dewey, of Manila fame, signed a report to the General Board which set in motion what he recommended establishment of an air department in the Navy "in line to the needs of the Navy in war."

Without the groundwork for four years prior by Vice-Adm. John L. Henshaw, John T. Spence, Capt. Washington Irving Chambers, Lieut.

Ellyson and Rodgers and others, the interest in Naval Aviation which brought about the General Board recommendations never would have been aroused.

Father of Naval Aviation.—Capt. Chambers, while not a flyer, might well be called the father of Naval Aviation. He interested Glen Curtiss and Eugene Ely, a pilot, in flying a plane off the deck of a ship. This history-making feat was accomplished by Ely in 1910 from the ship on the bow of the USS Birmingham at Hampton Roads, Va.

New Plant To Make Planes for China

Firm to operate with Chinese workers for DPC and AAF.

A new type of aircraft plant which will utilize Chinese and Chinese-American manpower exclusively, except in key executive posts, was planned last week at a series of conferences at Wright Field, Ohio.

Secret Site.—This new industry, Chun Aircraft, Inc., will be operated at an undisclosed site in California, and will build sub-assemblies for the swift, hard-biting Douglas A-20 Havoc twin-engine light bombers.

New Labor Force.—Two representatives of the Chinese Air Force participated in the conferences with Materiel Command representatives. The plan was to start in a matter of months the Chinese-American labor supply, making it possible to use many Chinese who have been hindered by language difficulties from filling other war production jobs.

Conferees.—Participants in the conferences included Col. Lynn Chou, for ten years a technical staff officer of the Chinese Air Force, now a member of the Chinese Air Corps, and an Air Corps Liaison Officer, Capt. P. S. Shieh, assistant liaison officer of the Chinese Air Force with the United Nations branch, Air Service Command, at Dayton, La. Col. G. E. McHardy, chief, Chinese Liaison Branch, Resources Control Section, and Maj. A. P. Evans, of the Facilities Unit of the Materiel Command.

Sub-Contractor.—Maj. Evans remarked that the plant would be operated as a sub-contractor under the new Plant Corp., and would secure facilities yet to be acquired. It was indicated unofficially that several plant sites in California were being considered. The new plant will be operated as a separate organization.

FEDERAL DIGEST

War Labor Board Turns Down Brewster Pay Increase

Summary of week's official action includes reports by NWLB, NLRB, WPB and DPC.

National War Labor Board has denied a request by Brewster Aircraft Corp. for approval of a two cents an hour increase for its employees at Long Island City, N. Y., Newbury, N. J., and Johnson City, N. Y.

Holiday Wages.—The request was made by the company to represent the approximately 20,000 workers in these plants for the less of holiday wages. The company's agreement with the United Automobile Workers (UAW) provided that the company were entitled to give holidays with pay, with added provision for double time for work performed on the holidays. They were also entitled, under the contract, to double time for work on two other holidays.

Under Executive Order 9840, involved in this case, employees may receive a maximum of time and a half for holiday work, and may be paid for only one day's pay. The employees may continue to receive pay at straight time for the holiday if as work is performed on that day. The board ruled that the increase requested by the company would circumvent the provisions of the executive order on the grounds that evidence was not substantiated which showed that holiday double time was an integral part of the cost of the wages.

DPC has authorized an increase in its contract with Fairchild Engine & Airplane Corp. to provide \$114,000 in additional facilities at a plant in North Carolina, resulting in an overall cost increase of about \$1,940,000.

An increase in contract with the Studebaker Corp., providing additional facilities at plants in Indiana and Illinois at a cost of about \$1,460,000, brought DPC's overall commitment with Studebaker to approximately \$90,000,000.

General Motors Corp. was granted an increase in its contract with the Ford Motor Co. for approximately \$1,000,000. The plant in Indiana at about \$113,000, resulting in an overall commitment of about \$1,000,000.

Defense Plant Corp. also announced (1) contract with National Aircraft Equipment Co., Los An-

geles, to provide equipment at a plant in California at a cost of approximately \$40,000; (2) increase in contract with American Aviation Corp., Jamestown, N. Y., to provide additional plant facilities at a cost of about \$1,150,000, resulting in an overall commitment of approximately \$1,340,000; (3) increase in contract with Packard Motor Car Co., Detroit, for added equipment to cost about \$1,800,000, bringing the overall commitment to about \$2,500,000.

Republuc Aviation Corp., Babylon, N. Y., was ordered by NLRB to cease and desist from encouraging membership in United Automobile Aircraft & Agricultural Implement Workers of America (UAW), or from in any other manner interfering with employees' self-organizational rights; to offer four employees immediate reinstatement with back pay and to rescind immediately its prohibition against solicitation in its prohibited union activity and solicitation on company property during employees' own time.

Electric.—Heavily cited production of the Electric Division of the Indiana Division and Modification Center Plant of Republic Aviation, Evansville, Ind., will hold election within 30 days, so that employees may vote for International Union, United Automobile, Aircraft & Agricultural Implement Workers of America (UAW), for International Union of Mechanics, or for neither.

NWLB has certified the IAM for representation of employees in plants and warehouses in California at Lockheed Aircraft Corp. and Vega Aircraft Corp., as the result of an election held by mail last month.

The WPB announced that it may require the use of Class A materials procedure is followed in making allotments of controlled materials for manufacture of Class A products, all provisions of CDP Regulations covering Class B manufacturing.

The War Dept. announced award of contracts for construction at an AAF installation in Napa County, Cal., to cost over \$1,000,000, for building strip and taxiways in Dallas Co., Ala., costing about \$480,000.



25-Mast Nazi glider.

First RAF plane received from Germany, Berlin, shows one of the German's Gotha 242 gliders after Allied bombing of the airport. This ship carries 25 men fully equipped, or maximum freight load of 2,000-lb. It is 50 ft., length is 52 ft. It has four machine guns. Its wheel undercarriage is jettisoned after takeoff. It lands on skids. Fuselage is hinged at the rear for loading. Shipped U. S. glider now built is the Waco CG-4A, carrying 15 men.

Wooden Planes Failing to Catch Up With Our Metal Combat Craft

Although U. S. eventually can match foreign craftsmanship in non-metal materials, it won't be in time to win this war.

What other countries have accomplished in production of wooden planes, America can and will do—maybe better in the long run. But at this time, don't expect the wood-veneer of the Mustang or American facilities turned over to the manufacture of the Mustang.

America's experience with wooden airplanes has not in the whole been a success and the armed services indicate that as far as the present war is concerned, we shall win it with metal.

Back to Metal—The biggest recent example is the switch from the Curtiss C-76 all-wood Corsair to the C-46 metal Corsair. Some of the training planes, especially the heavier two-engine crew trainers, have not been so satisfactory. One exception to this is the Fairchild AT-14 (new version as the AT-21), an advanced primary crew trainer. This company has had the advantage of a fairly long experience with Dornier's, a maker of great prestige. Despite Henry Kaiser's brilliant record in shipbuilding, it does not appear likely that even he can pull anything out of the hat in the use of wood in the field of big long-range cargo-transport planes.

Enough Aluminum—For another thing, the pressure for wood as a substitute for aluminum has been eased by the remarkable expansion of the aluminum industry during the past couple of years. By mid-winter there should be aluminum enough to take care of even the staggering amount which will be required when the heavy bomber program really hits its peak.

Wood Vs. Metal—That brings up the further question as to whether, apart from its use as a substitute for critical metals, wood, particularly in its modern bonded plastic plywood form, has any inherent advantages over metal in aircraft construction? One obvious advantage is that it would do away with riveting, and would insure a permanent and perfect smoothness which even

plexium, relatively a new-comer in the light metals field, has been given an increasing place in aircraft engines, landing gears and other parts of airplanes, but is not sufficiently durable for extensive use in thin sections. The Japanese, however, have used it to such a degree to obtain lightness and fast climb maneuverability in such planes as the Mitsubishi Zero that they have been extremely vulnerable.

Plastic Plywood—That left Wood Government, industrial and engineering groups set up committees of experts to study the possibilities of a widespread use of modern forms of so-called "plastic" plywood in thin surfaces and hundreds of small parts not subject to high stresses, as well as for wings and fuselage, leading to all-wood airplanes for trainers and eventually for combat types.

Wood as Battle—The British experience with the part-wood Hurricane fighter, backbone of the heroic resistance of the air battle of Britain, and the sensational success of the all-wood DeHavilland Mosquito, with top speed of well over 400 mph and range of more than 2,000 mi., was a great encouragement.

(The Mosquito has at least three versions, a fast, high altitude reconnaissance plane, an extremely useful special purpose bomber, both unarmed and depending on speed and agility to get away, and a very heavily armed long-range fighter or fighter-bomber version.)



Leading the Mosquito: Probably the world's most successful wooden combat aircraft, the DeHavilland Mosquito is shown being "bombed up" at a British base. The makers tell it is the "fastest aircraft in operation in the world."



From Plans to Planes at Wartime Speed

Victory won't wait. It needs planes of all kinds at wartime speed. Day by day, the planes Fairchild is building are being produced 'just a little faster.'

When war broke out, Fairchild called in scores of sub-contractors in order to compress a month's ordinary production of parts into a day. A record for assembling the tools and getting men to work—assisted by the Army-Navy "E" flying over its plants today.

Production shortcuts clip minutes from hours... and put planes into pilot hands just that much sooner. No time to wait for a stretching the made of steel. Fairchild makes it of wood, saving much time, much need. Special machines are designed for complicated forming operations once thought

impossible to execute except by hand... and highly skilled mechanics are thereby freed to join the production battle at another spot. A machine is built that cuts down milling time on one part by 500 per cent. Still another machine is built which shapes a fitting so ingeniously that many hours-per-plane are saved in its installation.

And so it goes—a minute clipped here, an hour there. Turn-around ideas from Fairchild employees have helped put more than one additional pilot over Rhine, Tunis, Hamburg.

Faster and faster roll the planes from Fairchild production lines. They must roll still faster... and they shall. For production, as well as performance, is behind "the touch of tomorrow in the planes of today."

"ON THE SCENE"

"The independence and liberty you present are the very best of our minds and great efforts of creative designs, engineering, and resources."

—Gen. W. H. H. Fairchild, Fairchild Aircraft Corp., St. Louis, Mo.

Fairchild Aircraft

Division of Fairchild Engine and Airplane Corp., Dayton, Ohio.



Equipped for high flying

It's the little things... auxiliary equipment... that lift limitations from the airplane. The designer of airplanes is of first importance but man's conquest of the air is not being won entirely by the men who create a better wing design, or fuselage, or motor. Credit must go collectively to the men, experts in industries other than aviation, who create highly specialized equipment to solve many of aviation's problems. Perhaps the most important: auxiliary to the airplane... the science that has concentrated much to the conquest of the air... in electronics. Radio communications, radio beacons and radio instrument landing... these things have made commercial air transport practical. And these things have spearheaded much to modern air power in warfare.

Vacuum tubes are what make radio "tick" and Eimac tubes specifically have been "ticking" in aircraft radio for years. Thus Eimac engineers have had experience with the problems of aviation, they have the product tried and proven to render superior service on the job.

* Our next problem, that of receiving high-frequency signals at high altitudes is solved by the odd appearing vacuum tube shown above. It is, in simple terms, a single pole double throw switch enclosed in a vacuum tube. Design changes in air pressure and ionization have an effect upon the operation of the mechanism. Actually a flash-over can be made to occur across the switch elements before any break-down occurs within the tube, yet the contact elements are never over fifteen thousandths of an inch apart. With this vacuum switch the handling of air-coupled radio signals that may be slipping in past being from light.

Follow the leaders to



EITEL-McCULLOUGH, INC., SAN BRUNO, CALIFORNIA

Export Agents: Pearson & Moore, 350 Clay Street, San Francisco, Calif., U. S. A.

DeHavilland of Canada has also begun production of the Mosquito.

Bombing Experience—Reports of the success of two of Hanna's latest and best fighters confirmed the view that wood has come to stay as a material for combat aircraft. The T-34 (I in the equivalent of the Army Air Force P- designation) better known as the YAK-1, from the first letters of the designer's name, Yakovlev, has a considerable amount of wood construction, and a still newer fighter, the LAO-3, is an all-plywood job, very active in this summer's fighting as an attack plane.

AIR WAR REVIEW: Our bombers continued to range far and wide in Europe in a continuation of the heaviest and widest-ground air assault yet known to the world—from the Baltic to the Mediterranean, from the Atlantic to the heart of Germany. The criss-cross attacks came from England, from North Africa and from the Middle East.

Pennemunde's Flight-Special mission is due one road because of its strategic value. The target was Pennemunde, about 60 miles northwest of Bielefeld, on the estuary of the Oder River. At this mystery place the Germans had set up headquarters of their research and development. It was there that secret weapons and secret explosives were developed and it was there that RAF bombers caught Nazi men of science with devastating hits.

Heavies—Casualties in men and planes have been severe. Our instant air-bombardments of the German heartland are being met with stubborn resistance as the Nazi anti-aircraft and fighter defenses are being concentrated.

Every Four Days—Indications of the terrific aerial pressure on the Nazis is shown by statistics released by Headquarters of the Eighth Air Force in England. This force alone during the last year dropped 15,722 tons of bombs, made made on an average of one every four days, shot down 1,728 Nazi planes; got 871 additional possibilities and 870 destroyed Our losses—419 bombers.

Arthur Koestler—Gen. MacArthur's airforce brought destruction to the Nips at Wewak in crushing blows, successive attacks on that air base having netted more than 300 enemy planes, bombers and fighters, the majority of them smashed flat-landed on the ground.

At Solomons, following the Wewak raid, the enemy's order rang



Dornier Do 24 Shown on take-off is an AT-31, Fairchild gunnery trainer, constructed at Dorland, described by the Navy's Military constructor as one of the most successful welded plywood structures.

of defense cracked. At the other end of the 1,000-mi front our heavy bombers again visited Balikpapan on Borneo, a 2,500 mi round-trip-inflicting damage on enemy installations and shipping at this key Jap petroleum center. And Liberators came in on Penang, Dutch Celebes, to put 57 tons of bombs on the one known operating nickel plant in Japanese-occupied East Indies.

Kicked Out of Kiska—The Japs evacuated Kiska, a base made untenable by the more than 4,000,000 lb of bombs dropped on its 33 targets in seven months, plus, of course, shelling by American warships.

Flying Fortresses in Nazi Hands—It was disclosed at American headquarters in England that the German air force has been using captured Flying Fortresses in its defensive battles against our bombers. The Nazis apparently have been making captured bombers, still bearing their American identification, into Flying Fortress formations. The purpose of these acts, it was deduced, was not for future purposes but to repeat the attitude and general course of the existing formation to ground batteries and fighter squadrons and to study the American formation for information that might be useful in future defensive operations.

Lancasters Won't Be Built in U. S.

British fails in effort to get Mustang assembly plant.

Contrary to rumors, the British Lancaster will not be built in the United States. About a month ago American daylight bombing operations began over occupied Europe, criticism

that our Fortress and Liberator heavy bombers were unsuited to such work were rife, and rumors that this country would build the Lancaster have generated for some months. British opinion of the Fortress is now happily reversed, so much so that they like to have a few along in their big night operations to help knock off the improved Nazi night fighters. Canada is now turning out Lancasters, and an improved model is now in operation in England with four Bristol Hercules 1,600 hp air-cooled engines.

Criticism—A similar criticism was to the effect that our Allison-powered Warhawk and Airacobra were not good enough for fighter escort, and that we had no night fighters. This proved the fact that the P-39 and P-46 were not designed for this purpose, and that they had a highly satisfactory record in other theaters. It also overlooked the fact that we had American-built night fighters, the Lightning and the Thunderbolt, had not seen extended service at that time. Anyway, we are not building any Spitfires over here.

Reasons—Sometimes the rumors went the other way about. From the start the British were more than delighted with the North American Mustang, which they used as an Army scout, presently serving as the world's best in that category. They were so keen on the new Merlin-powered version that they wanted North America to supply quantities of subassemblies and parts over a month, for final assembly in England by Victory-Supermarine, builders of the Spitfire. It is understood that this plan is not to be carried through, and that in the long run North America can turn out a larger total number of Mustangs by building them here all the way through. NAVIGATION

AIRCRAFT PRODUCTION

Manpower Muddle to be Handed To Congress for Action

Everybody in Washington surveying the situation but hesitating to issue orders to correct shortage of workers.

By SCOTT HERSHEY

The manpower situation—the Nation's No. 1 problem—is caught in a maelstrom of uncertainty, confusion and contradiction, but one thing is certain and agreed upon by all—it is critical.

No Solution—This many-sided problem is no easier solution than it was a week ago, but that is not because it hasn't been studied and surveyed, because it has—by the War Manpower Commission, the War Production Board, the Army, the Navy, Selective Service and other top government officials.

"Work or Fight"—As forecast here last week, the WMC "work or fight" order has had little beneficial effect on the industry. It becomes increasingly evident that little of any definite action will be taken until such time as this red hot potato can be dropped into the lap of Congress when the legislators return to Washington the middle of September.

Quick Action Vial—High government officials returned from a series

of surveys on the Pacific Coast with conclusions known long since—that the situation there is increasingly critical and that West Coast aircraft manufacturers and other war contractors simply will not be able to meet present production schedules unless some quick and definite action is taken.

"Activated"—A manpower meeting in Washington August 25 produced neither. No consensus was reached, at least no unassessed conclusions. But here's what did happen: A committee, long set up in WPB was "activated." This committee is called the National Labor Requirements Committee. Clifton C. Goiden, WPB vice-chairman for manpower requirements, is chairman, but due to illness was not able to attend the meeting.

Many Cooks—Here are the cooks who had a hand in the broth: representatives of the War Manpower Commission, the Army, Navy, Maritime Commission, Petroleum Ad-

ministrator for War, Aircraft Resources Control Office and the following WPB Divisions: Office of War Utilization, Rubber, Office of Civilian Requirements, Operations Vice Chairman and Program Vice Chairman.

Continue Study—The membership of the National Labor Requirements Committee was said to be not definite yet and a number of temporary or substitute representatives of the various offices were present. It was decided to hold another meeting within two weeks. The various representatives were asked to study the problem and present suggestions for the next meeting.

Questions of draft deferment for aircraft workers, incentive pay programs and changes over from three eight-hour shifts to two 12-hour shifts-hour shift was not raised.

Up to Congress—Meanwhile, Manpower Chief Paul McNutt pointed out that Selective Service permitted no blanket deferments for individual groups and that such questions were up to Congress. He indicated he thought it was a probability. He endorsed the West Coast situation was critical. He reiterated that the Armed Forces presented their manpower needs, Selective Service informed plans director of their goals, and these in turn were passed to local boards.

Forced Draft Doesn't Bore—The War Manpower Commission's work-a-right directive and the announced possibility that nearly half a million fathers this draft this year did not immediately, at least—have the effect which officials hoped—that of forcing fathers out of non-essential



LIBERATOR TURRETS:

The AAF has released these close-ups of the B-24 Liberator's powered bell belly turret (left) and power

tail turret. Each has two .50-caliber machine guns. The Liberator is reaching the fighting fronts in increasing numbers.

industries and pursue into aircraft and other war plants.

Washington Must Decide—West Coast executives who have taken every step possible to utilize available manpower, manpower and even manpower, have told federal officials, in effect, that Washington must decide where men are most needed.

Indications of labor shortages are beginning to appear in some aircraft industrial centers outside the West Coast, but this far they have not been too serious.

Permanent Deferment—WPB was reported studying a plan to obtain

permanent deferment from military service for aircraft workers. Workers in West Coast plants are now under a limited deferment which ends October 1, but Congress must take two weeks before that date.

Problem Unsolved—At the same time, it should be noted that military operations constitute a small percentage of the total labor turnover in aircraft plants. Thus, while draft deferment would save some labor personnel, including employees in engineering departments, even a blanket deferment would not solve the problem.

Exit Women—Many aircraft ex-

ecutives report that many women are leaving their plants, an important item in view of the large percentage of women now employed in aircraft production.

The problem identified is many-sided and pregnant with repercussions. Plan homelessness is one cause, but that in turn goes back to transportation, housing, lack of adaptability to industrial life, higher wages in other war industries—particularly on the West Coast—and many other factors.

Legislation?—National Service legislation, some whisper, is now being talked out loud.

Washington Officials Expect Bigger Plane Output This Month

Lane pickup probably will raise August total above July's 7,737, experts believe.

The aircraft industry appears to be headed for an August production figure which will exceed July's announced 7,737, despite manpower and other problems, Washington officials believe.

Pickup—After running ahead of July for the first part of the month, production was reported off slightly and just about holding its own with July, but with definite indications of a late-month pickup.

Gradual Gain—Even with a clearing of today's pressing production problems, production was expected this month to increase from here on out are bound to be slow

and gradual. There is some indication to revise downward, previous estimates for the year which were somewhat under hoped-for gains.

Schedules Revised—The so-called working schedules have now been revised six times and officials are hopeful that the present schedules will stand for the rest of the year, at least, although uncertainties are always present.

Investigation—The definite lag in engine production continued to figure and this was a focal point of investigation during the week. The Shufelt, the Lockheed plant of Wright Aeronautical Corp., set at

88 percent by Max Gen. Oliver P. Shufelt, naturally enters into any total industry figures. In addition, the Lockheed situation was reported to have had repercussions in some other engine plants.

Martin Initiates Patent Payment Plan

Seven employees already compensated for patentable ideas.

Employees of The Glenn L. Martin Co. are given an opportunity for an equitable share in any income derived from their inventions through the Employees' Patent Remuneration Plan.

Investment Rewarded—Although the plan has been in operation only a short time, seven Martin inventors already are reder as a result. Under the plan, whenever



2,600th C-47 AUTOGRAPHED:

For the first time since the Douglas Aircraft Co.'s Long Beach plant opened in 1941 the Army has permitted publication of the factory's production. The C-47, the 2,600th, was autographed from nose to tail by 2,600 workers when it came off the line Aug. 19. The C-47 is in production at Long Beach and Okla-

homa City. The 2,600 figure does not include anything but C-47's. None of the DC-3's or C-53 troop transports is omitted. As a result, the figure does not present a true picture of Douglas twin-engine output since Pearl Harbor. And, as a sign step on the tail of this plane, "This is not the end."

Trail Blazing in the Skies

1934



THE ART OF FABRICATING AIRCRAFT STRUCTURES

was greatly advanced by a series of unique strength-model tests developed by Goodyear Aircraft Corporation in 1934. A method was devised by which the performance of full-scale air frames can be accurately determined by model tests. These tests provide exact duplication of wind, bending, torsional and other characteristics of prototype members - under various load combinations. As a result, stresses, strains and other factors on all types of aircraft components can now be determined by accurate designers more precisely than ever before.

HOW GOODYEAR AIRCRAFT CORPORATION SERVES THE AIRCRAFT INDUSTRY

1. By constructing industrial plants to manufacture aircraft components
2. By designing parts for all types of airplanes
3. By re-engineering parts for mass production
4. By conducting new research to advance the art and the science of air design in engineering problems
5. By building complete airplanes and airships

1943



APPLICATION OF THESE PRINCIPLES

in the construction of airplane components has enabled Goodyear Aircraft to design and fabricate intricate aircraft structures meeting the highest standards for strength and quality. That Goodyear parts meet the most rigorous specifications of the industry and the air services is exemplified by the great variety of tail, wing and fuselage assemblies we are producing for a number of manufacturers of America's most famous warplanes, both bombers and fighters - and is further exemplified in our own output of complete airships and the Conquest FG-1.

GOOD YEAR
AIRCRAFT

an employee, in the course of his work, brings upon a new idea or develops a new feature or device, a complete description of the invention is sent to the Patent Department, headed by Patent Attorney G. Douglas Jones. Once the invention is deemed to be patentable, the department contacts the worker and aids him in the preparation of necessary data.

► **Employee Benefits**—Although the patent is assigned to the company, an agreement is made which provides that while the company bears the expense of patenting, and where the opportunity arises, licenses it to outside concerns for manufacture, the employee receives a share of the proceeds, starting at 10 percent until he has received \$5,000, and according to a sliding scale thereafter.

The Plan does not conflict with the War Production Drive Labor-Management negotiation box procedure, but is an added source of motivation.

Kellett Net Down

Kellett Aircraft Corp. showed a net profit of \$138,967 or 33 cents a share for the first six months of this year. This compared with \$188,373, or 47 cents a share for the full year of 1942.

Experienced Manufacturer of Aircraft Parts and Assemblies OFFERS ADDITIONAL FACILITIES for production of other precision parts and assemblies



Although we are now busy producing war planes and parts and assemblies for aircraft, tanks, and guns, we have available additional production facilities for the manufacture of other precision parts and assemblies. Immediate Engineering Service on Process Engineering, Manufacturing Methods, Tool, Die, Fixture and Machine Designing, Designing and Building.

Contact us NOW! Write—What is Place for aircraft
HENRY COOK INDUSTRIES
2320 River Road — P. O. Box 105 River St.
DETROIT, MICHIGAN

W. L. COOK, President
J. H. COOK, Vice President
J. H. COOK, Secretary

Tentative Amendments Drawn For New Renegotiation Law

Proposed changes to be considered by House Ways & Means sub-committee next month.

Changes in the contract renegotiation laws to permit aircraft contractors and other war contractors to retain sufficient reserves for post-war conversion have already been written in tentative form for consideration by a House Ways and Means sub-committee which will start hearings on September 8.

► **Opposition**—This does not mean that these changes will have clear sailing, because they won't.

The selling, because they won't, the selling, because they won't, the selling, because they won't.

► **Prudent Management**—The House Naval Affairs investigating committee has been advised by the department that it believes existing tax laws are not too severe to permit "prudent management" to accumulate adequate post-war reserves.

► **"Sufficiently Good"**—Says Navy—The Navy took the position that in many cases the 10 percent post-war credit allowed under existing profits "would be very substantial," which is considerably under that proposed by the plan sponsors.

► **Higher Tax Rate Proposed**—At the same time a new tax plan was in the wind—one designed not only to increase federal revenue but also to permit the building of individual and business reserves against post-war conditions. This plan proposes an increase in the excess profits tax rate from 88 to 90 percent.

► **More Increases**—At the same time, it would decrease the post-war credit from 10 to 15 percent. The plan also proposes the substitution of a new, negotiable, interest-bearing bond, redeemable after the war with tax credits for the purchase of such bonds up to 15 percent of taxable net income, to taxable buying. The plan also proposes an increase of from 6 to 8 or 10 percent of the normal individual income tax rate, the individual income to remain unchanged.

► **Post-War Conversion**—Rep. Daney, chairman of the sub-committee, will have this and other proposals under consideration. Daney has written proposed legislation to aid

post-war conversion of plants. Rep. Carl H. Hays, a member of the aviation sub-committee of the Interstate and Foreign Commerce committee, also is sympathetic and explained that "if new contracts were cancelled on the cessation of hostilities without some provision being made for conversion, not only would the airplane companies be broke, but so would the entire area which depends upon the industry."

► **Favor "Sufficient Funds"**—Hays favors permitting aircraft companies to keep sufficient funds for "conversion and deflation of surpluses and facilities at the end of the war," and expressed the belief that labor would support such a plan because of its bearing upon the companies' ability to set up a peace-time business.

Rep. E. W. Link, a member of the Naval Affairs sub-committee, is working on proposed legislation to require preferential treatment to assure peace-time conversion.

► **Reserves Essential**—In this connection, Francis A. Callery, vice-president in charge of finance for Consolidated Value, emphasized that the industry is not opposed to the objective of renegotiation in preventing excessive profits, but that the aircraft industry is desperately in need of necessary reserves for post-war transition. These reserves should be exempt for renegotiation.

► **Shrinkage**—Even the most ardent aviation enthusiasts cannot foresee anything but a shrinkage of business in the period immediately following the war," Callery said.

► **New Designs for Peacetime**—Assuming its ability to survive the post-war transition, Callery pointed out that the aircraft industry would then need capital to develop products.

► **Seed Money**—"It costs real money to build a new, big airplane," Callery said. "This money—seed money" has been called—must be available in the hands of aircraft manufacturers if they are to continue in business."

► **Future Corps profits to depend on construction reforms.**

Major considerations which confront aircraft builders and airlines in assuring profitable operation of post-war aircraft plants were outlined by James B. Kendrick, chief of economics and flight test of Vega Aircraft Corp. in an address before the transportation and maintenance meeting of the Society of Automotive Engineers in San Francisco.

► **Weight Costs Profit**—Kendrick emphasized that excess weight of airplanes must be held in check, pointing out that even a pound of weight may cost the operator of the plane \$200 in profits over the plane's normal life.

► **Step-It-Go**—The advantages of high speed planes, he said, may be wiped out on frequent-stop routes by excessive ground handling time, and in this connection called for maintenance and inspection frequency must be increased for safety as cargo plane speeds are increased.

Kendrick suggested quick change on one means and simplified inspection of critical parts for the reduction of overhaul time costs.

► **Automatic Controls**—He said that the "appalling complexity" controls and instruments require highly skilled personnel and in many cases extra crew members to relieve the pilot. Kendrick suggested that more automatic controls and the use of warning lights instead of indicators would simplify the plotting of large airplanes and reduce operating costs.

► **Insulation**—Further reductions would be possible, he said, by greater cooperation between operators and engineers by insulating engineers with the inspection of conversion in handling and maintenance as well as aerodynamic refinement and low weight.

► **Aluminum, Magnesium Shortages Ended**

Joe Jones announces current production rate of all planes

The present rate of production of aluminum and magnesium insures an adequate supply of these metals according to an announcement by Secretary of Commerce Jones

ALLISON-BELL OVERHAUL: Photo of an expert Bell Allison engine is seldom released by the War Department. This one, made at manufacturers, shows mechanics overhauling an Allison engine on one of the early P-39's.

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PREHEATING ARMY PLANES IN ALASKA:

The North American B-25 (below) and fighter engines warmed in padded canvas hoods, are being prepared on an Alaskan airfield for a flight. Motors are being pre-heated by portable fuel heaters. Motor drivers just blow air through pipes into the "catalytic." The heat is confined to points where it is needed. Proper flying temperature is reached in from 15 minutes to an hour, depending on the weather.



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DEVICE PREVENTS ICE:

Dr. Louis Morich, U. S. Rubber Co. scientist, has developed this device to prevent formation of ice on propeller blades. A strip of rubber has been made a conductor of electricity by addition of chemicals and is attached to the edge of the blade. Possage of the current across the rubber, preventing ice formation. NACA will make further studies.

He said that during July Reynolds Metals and the Aluminum Company of America produced a total of 77,489,266 lb. to which government-owned plants added 73,282,000 lb. for a total of more than 150,000,000 lb. compared to the pre-war monthly output of about 25,000,000 lb.

7 Times Pre-war Output—Government-owned plants produced 21,493,666 lb. of magnesium in July, said Dow Chemical Co., the only private producer, 3,368,000 lb. Prior to the war, total production in this country was about 300,000 lb. monthly.

Total production of aluminum in government-owned plants through July amounted to 815,396,725 lb. and the combined production of government-owned magnesium plants through the same period was 235,540,274 lb.

Goodyear Doubles

Sales in a Year

Report for first half of 1943 shows \$4,123,061 profits.

Goodyear Tire and Rubber Co. more than doubled its war production during the first six months of this year as compared with the same period in 1942, reporting net sales of \$368,568,545.

Net Profits—For the first six months, net profits were \$7,245,329, equivalent to 2 percent on the greatly expanded net sales or \$8.82 per share of outstanding stock. In the first six months of 1942, with net sales of \$279,555,568, net profits reported were \$4,123,061 or \$1.24 per share.

Reserves—\$7,890,612 has been set up for the post-war rehabilitation of plants and equipment, for post-war property adjustments and other contingencies. The financial statement pointed out that all transactions for the period were subject to negotiation.

New Tire Tread

Firestone product safer for high speed landings.

An airplane tire which can live longer and stand up better under heavier usage has been developed by Eugene A. Roberts, of the Firestone Tire and Rubber Co.

Channel Tread—Roberts developed a "channel tread" which not only makes possible safer landing of military craft at high speeds on rough terrain, but also saves rubber and other critical material through the simplification of the wheels on

which the new tire is mounted. He says that tests show planes equipped with such tires can be brought down on any level ground with little danger.

Secret Process—Details of the process involved were not disclosed, but patent rights and specifications have been made available to the entire rubber industry. Roberts received the Citation for Production Ideas, highest award of the War Production Drive Labor-Management Committee's Board of Industrial Ideas.

Plant Expansion

Passing Peak

WPI says month by month decreases in construction likely.

War Production Board, in announcing that the volume of construction activity declined \$718,209,668 during June, a 48 percent decrease from the corresponding month last year, said that expansion work at aircraft plants will show moderate decreases during the coming months.

15% Increase—Work at government-financed 100-sq-ft gasoline plants increased in June and anticipated future monthly increases will result in an estimated 18 percent increase in the second half over volume at the first half of '43.

Other Industries—Future activity will be concentrated in the aircraft, iron and steel, non-ferrous metals, shipways, synthetic rubber and aviation gasoline categories.

Responsibility for all phases of the 1943-44 program except construction remains in the Relieving Division. Chief of the new division is Max H. Miller.

Lombard Urges Cut in Other Production

A cut-back in production other than aircraft or a reduction of draft quotas for western states, particularly California, are advanced as alternatives to provide additional manpower for the Pacific Coast, by Dr. E. A. Lombard, Jr., Director, Manpower Division, Aircraft Resources Central Office.

Seeping Bottom—Dr. Lombard, recently returned from a Pacific Coast survey, agreed that the manpower supply for war plants was seeping bottom under present conditions and that aircraft manufacturers were

directly in need of help if production schedules are to be met this year.

Man Need—Originally, Dr. Lombard was hopeful of convincing airplane manufacturers that they should release some of their employees to aluminum plants—also in need of men, but the aircraft situation developed to such a point that this plan was not feasible. He said that about 1,000 workers would relieve the aluminum situation, whereas aircraft manufacturers could readily absorb from 10,000 to 30,000.



BOOTS LENGTHEN THEIR STRIDE

Protective umbrellas of camo-based planes must have both altitude and range.

An air umbrella should be able to attain great altitude. In addition, its planes must have fuel enough to patrol vast areas of hostile ocean. That these aircraft are able to meet both requirements is due in important measure to the lightness of Boots all-steel, self-locking nuts. Because Boots Nuts are lighter than other nuts, the weight they save can be utilized for extra gasoline—or ammunition.

Lighter Boots Nuts can "take it," too. No plane vibration can loosen them. They withstand the corrosive action of salt water, oil, or chemicals. They can be used over and over. They literally "outlast the plane." In addition, their easy application materially reduces repair and maintenance time. These nuts, used on every type of U. S. aircraft, meet the exacting specifications of all government agencies.

"They Fly With Their Boots on—Lighter"

BOOTS

Self-Locking Nut for Application in All Industries

TODAY, When Metal Is Scarce . . .

Because of their universality, Boots Nuts, though their use on airplanes alone, save hundreds of tons of precious metal and millions of dollars for Uncle Sam. Boots Self-Locking Nuts not only protect all types of aircraft, but are used on RADAR installations, AUTOMATIC PARTS, and a wide variety of industrial applications, as well.

THERMISTORS, these lighter, tougher Boots Nuts will protect your AUTO MAGNIFIC, ELECTRIC REFRIGERATORS, WASHING MACHINES, VACUUM CLEANERS and other household appliances. They will lengthen the useful service of industrial, home and office machinery. Proof against vibration, corrosion and temperature, Boots Nuts protect efficiency wherever they are used.

BOOTS SELF-LOCKING NUT CORPORATION • GENERAL OFFICES, NEW HAVEN, CONNECTICUT

Air Traffic Soaring to New High; Some Gains 100% Over Last Year

Reports for periods varying from one to twelve months released by CAB and airlines.

By MERLIN MICKEL

Nowhere in the increased business the domestic airlines are doing more evident than in their reports on traffic figures.

Shallow Statistics—An American Airlines commented in one of its announcements, in an observation that merits general application, "poured miles of mail and express flown have reached such astronomical figures in 1943 as to be almost incomprehensible."

Volume Up—The Civil Aeronautics Board found that in June mail pound-miles flown by the 11 domestic airlines were 77.8 percent higher than in June a year ago. Express pound-miles were up 37.4 percent, and revenue miles 14 percent, while revenue passenger-miles were 22.8 percent higher.

Also last June the average plane load was nearly 16 passengers, 456 lb. of mail, and 312 lb. of express. A year ago it was 14 passengers, 426 lb. of mail, and 261 lb. of express.

Scheduled Mileage—The lines two months ago flew 50 percent of scheduled mileage, and 91 percent of the 18 average available seats per mile were occupied, no com-

pared with 78 percent of almost 38 percent available seats a year ago.

Believe-It-or-Not—Here are some of these "astronomical figures," for the year ending June 30, 1943: revenue miles flown, 97,653,676; revenue passenger miles, 1,625,919,319; mail pound miles, 54,531,460,186; express pound miles, 20,060,493,392.

Want to go on? Comparative figures for the year ending June 30, 1942: revenue miles, 115,936,379; revenue passenger miles, 1,517,631,315; mail, 51,732,977,549; express, 19,932,137,542.

Francy Figures—Despite the drop in the 12-month comparison, revenue miles flown in June, this year, were 8,842,664, and higher than the 7,609,855 for June, 1942. Revenue passenger miles last June were 146,656,667, compared with 135,471,525 in June a year ago. Mail pound miles were 5,964,776,137 in June, 1943, compared with 5,240,793,478 in June, 1942, and express pound miles were 2,676,036,300 as against 1,936,465,390 in June last year.

Revenue passenger load factor (92.64 last June and 76.18 in June, 1942) was 82.23 for the 12 months ended June 30, this year, compared

with 64.24 for the year ended June 30, 1942.

Among the Airlines—American Airlines reported 11,351,629 lb. of express carried during the first seven months of 1943, an increase of 102.1 percent over the same period in 1942. Air mail earned was 13,760,970 lb., 84.4 percent over the first seven months of 1942. Pound miles of express in the first seven months this year were 5,370,413,525, and pound miles of air mail \$4,477,462,248, gains of 90.1 and 56.7 percent.

United Air Lines—July saw new records in mail pound miles and express pound miles for this carrier. The former were estimated at 1,532,240,100, a 16 percent boost over July a year ago. Estimate on express was 710,594,823 lb.-mi., an increase of 4 percent over July, 1942.

TWA—Transcontinental & Western Air carried more passengers per revenue plane mile in both June and July than it ever had before. June established a high of 13.8 passengers per revenue plane mile. Average in 1942 was 12.2. TWA also recorded record loads for air mail and express loads in the first six months of this year. Increases were 190 and 74 percent, respectively, over the same half of 1942.

New highs in passenger revenues were shown, preliminary estimates for July being \$1,258,706, a figure 849,324 above the record set in June.

Confidential Air—Upwards in traffic and sales was reported by Continental Air Lines, whose July passenger revenues were 123 percent higher than July, 1942, and 4.3 percent above June, to help make up the largest income month in CAL's five years of operation. Passenger revenue miles in July were 118 percent above July, 1942, and 6.9 percent over June. Load factor was up 44 percent over July a year ago and 2.6 percent higher than June. Schedule performance of 96.73 percent was 3 percent over July, 1942, and 3 percent over June this year.

Mail Pick-Up Soars—All American Aviation reports that air mail traffic on its mail pick-up system has increased 73 percent and air express 75 percent over 1942, with July traffic breaking all records with mail volume 74 percent and express 29 percent over July, 1942.

New High—A July total of 2,616,976 revenue passenger miles, 5.11 percent above the June figure, was flown by Western Air Lines. The company reported its revenue passenger mileage was 42.06 percent above that of July a year ago.

Northwest Airlines reports its

planes flew 337,373,463 mail pound miles in July, an increase of 55 million over June. Air express postage earned in July was reported at 104,134, or more than 2,000 lb. above June.

Airlines Suggest Simpler Tariffs

Air Traffic Conference will study subject for future action.

Twenty-three airlines, visualizing vast expenses in air commerce after the war, have constituted the Air Traffic Conference to undertake preliminary study of publication of general tariffs with a view to simplification and economy.

M. F. Hedrick, ATC's executive secretary, under whose direction the study will be conducted, says tariffs now are cumbersome and complicated—"you have to be an expert to interpret them."

Strive to Simplify—Aim of the study will be to find a simple style for transportation documents, and for easier determination of rates, fares, rules and regulations, yet meet compliance with applicable legal requirements, assure adequate facilities to carriers and adaptability to repatriation and revision.

Budget Set—Charles C. Hubbard, director of the tariff division at ATC, will be in direct charge of the work, preliminary phases of which are expected to take three to six months. Hedrick said he didn't know how much it would cost, but the agenda for ATC's regular meet-



AMERICAN'S FIRST SCHEDULED CARGO FLIGHT

When American Airlines launched the first trans-continental all-cargo service a few days ago, the east-bound flight from Los Angeles to New York was greeted at Washington National Airport by Jack Lee (left), commander of the Civil Aeronautics Board, and H. W. Judd of the Washington office of Railway Express Agency. The plane arrived in New York with a 2,001-lb. load, of which 1,213 lb. were air mail and 500 lb. express. Take-off load at Los Angeles was 4,554 lb., including 2,235 mail and 1,713 express. Peak load of the trip took off from El Paso—2,739 lb. of mail and 1,504 express, a total of 4,243.

ing at Denver recently, where the study was approved, set a budget at \$10,772 on a six months' basis.

Objectives—The researchers hope to find in their preliminary studies answer to how they may proceed on a long term effort to bring about the desired result—a determination of the minimum requirements of tariff publication in the air transport industry.

"The time may come," Hedrick said, "when there will be not 289 but 2,893 planes in the country that will have to be accounted for in their tariff reports. In addition there may be planes elsewhere in the world. We want to be ready for that time, and the breathing space before post-war expansion seems a good one in which to prepare." Tariffs at present are revised constantly, though there are four general revisions a year.

New members of the ATC, taken in at the mid-summer meeting, are American Express Airlines and Pan American Grace Airways. V. P. Conroy, vice-president in charge of traffic and sales for TWA, is this year's president of the conference.

Agree on Evidence In PCA Mail Case

Line asks Baltimore-Pittsburgh for postal money.

Agreement on limitation of evidence was reached at a preliminary conference on application of Pennsylvania-Central Airlines for authorization to carry mail between Baltimore and Pittsburgh and include the former as an additional intermediate point on route 14.

To Show Need—A report on the conference by F. A. Low, Jr., Civil Aeronautics Board examiner, said that since PCA already is operating between Washington and Baltimore with mail, it was agreed evidence would be submitted only to show need for inclusion of a mail authorization over the east-west route and inclusion of Baltimore as an intermediate point on the Washington-Pittsburgh route.

Public comment asked for an exhibit to show probable additional cost to the Post Office Department on the basis of additional mail mileage which would be flown.



BREACH ACCEPTS PCA CITATION

Pennsylvania-Central Airlines recently filed Detroit as one of its "Victory Cities." Ernest R. Breach, president of Beech Aircraft Corp., was first among car leaders to receive a framed picture of the early city commemorating the award. PCA's Detroit office manager, Harold O'Brien, is making the presentation.



TWA'S PORTABLE D.F.

This portable radio direction finder on wheels has been built for radio and flight students by M. E. Cherk, TWA instructor. The instrument, controls, and loop are the same as used on transports. The instructor can train his students at once.

PERSONNEL



one-time manager of Lousiana Airport, executive pilot and supervisor of experimental department

TWA has created new regional mail and express posts in Philadelphia, Kansas City and San Francisco to expedite the heavy flow of vital war materials and mail. Edward N. Rosen, passenger agent for TWA in Philadelphia, will fill the newly created post of mail and express representative in that city. Robert V. Keel, former regional representative at Dayton, was transferred to the new office in Kansas City to supervise handling of mail and express in Indianapolis, St. Louis, Wichita, and Albuquerque, as well as Kansas City, and Des Moines, express representative for TWA at Los Angeles, has been transferred to the new office in San Francisco. Several other changes have been made in the TWA system mail and express depart-

ments during the past month. William R. Hines, Chicago representative, moved into Dayton and was succeeded at Chicago by Clarence Olson, who had filled the same position in New York. Frank L. Babin, Baltimore passenger agent for TWA, took leave the past week by transfer to Los Angeles.

Harvey F. Law (photo) is appointed manager of Washington-National Airport, so succeeded John Gavett, who is joining the Air Transport Association. Law was previously regional supervisor of airports for the CAA, working out of the CAA, working out of New York City, a designer of airports for various airlines, an engineering draftsman with Wright-Martin Aircraft Corp., and a civilian flying instructor with the U. S. Army Air Corps. He began his career in aviation in 1914 when, as a student at Springfield (Mass.) Technical High School, he built and flew his own glider.



Robert E. Glodet, with Northwest Airlines for the past 11 years as chief executive, office manager and supervisor of accounting, has joined Chicago and Southern Air Lines as assistant to the treasurer.



Norman E. Anashkin, (left), for years in the Treasury and Personnel Departments of Chicago & Southern Air Lines, has been named district traffic manager at Memphis, Tenn. Before joining C & S, he was manager at the Consolidated Ticket Office in Los Angeles. He replaced John A. Sudd, also formerly with Consolidated Ticket Office, who joined Chicago & Southern as ticket agent at Memphis and is now transferred to Houston, Tex.

After five years with Douglas Aircraft, recently at the Seattle Boeing plant, Jack Jensen has been appointed general supervisor in charge of all plane control activities at the Tulsa plant.

Walter D. Park of Pan American-Grace Airways has been transferred to the executive staff in Lima, Peru. He formerly assisted to the vice-president.

William D. Kaneb, vice-president in charge of sales and service of Wright Aeronautical Corp., has been appointed manager of the Lockheed plant, spending time in W. Palm, when in Princeton, N. J., as manager of industrial relations.

Canadian Pacific Air Lines has appointed E. Phillips acting superintendent of the Edmonton to Whitehorse section. Concurrently D. S. Adams was appointed superintendent of stores at Winnipeg. A. G. Hall and G. A. Lundberg were appointed equipment inspectors at Winnipeg and Edmonton, respectively.

Douglas Aircraft Co. appointed Ben G. Howard, former senior airman and engineering test pilot, as assistant to Donald W. Douglas. His work will concern all technical and flight problems of Douglas Aircraft and its airline customers.

William E. Mosley, chairman of the Industrial Facilities Committee of the War Production Board, was appointed deputy vice-chairman for production. He will direct all production activities within the WPB industry divisions and bureaus which report to the Office of the Operations vice-chairman.

Chicago & Southern Air Lines names W. C. Burke general air cargo manager for the entire system. Burke was only recently appointed director of research and planning and before that

had served as district traffic manager at Memphis, Houston and Chicago. His headquarters will be established in Chicago.

Louis F. Holman has joined the public relations staff of Consolidated Value Aircraft. He was formerly with the War Relocation Authority, New York, correspondent for Central News of London and an organizer and member of the board of governors of the New York Postcard Writers Assn.

Donald A. Dell has joined Continental Air Lines as executive assistant, after 13 years of airline experience with Northeast Airlines and Pennsylvania Central. With the former company he served as general traffic and sales manager, and was previously Washington representative for PCA and concerned with the development of new territories for the company.

Neil Puschall (photo) is appointed manager of Transport Aircraft by Douglas Aircraft Co.

He will handle all matters pertaining to cargo and transport with the airlines, Army, Navy and other domestic customers. Jack Asher will continue in charge of Contract Administration's report and control phases and foreign business. Puschall was formerly assigned to Gordon Brown in Contract Administration, in the Protective Control Division, and a pilot with United Lines.



THE NEWS VIEWS—

Being a teacher of physics, a mail pilot, a lawyer, vice-president of a large aircraft company and president of the Aeronautical Chamber of Commerce all in a lifetime doesn't happen to many men. But these are some highlights of the career that Jim Murray has piled up behind him.

Murray was born in Mystic, Conn., in 1892 and lived all over New England as his youth. Graduated from Trinity College in 1914, he joined the faculty of the New Mexico Prep School in Hatch, N. M., and our entry into World War I found him there teaching physics, Latin and mathematics. A too long waiting list for our Army Air Service resulted in his joining the British Army Air Forces. After pilot training, his trouble past with him and Murray spent the rest of the war constructing in England.

A week after the Armistice, Jim Murray started flying mail with the Army of Occupation. His run was from Folkestone, England, to Cologne, Germany. In November, 1918, he returned to his little school in Hatch, N. M., but the life of the bug was too strong and the following spring found him in Washington as mail pilot on the New York-Washington run.

For eight years, Jim Murray pursued this career in various posts throughout the country, with never a dull moment. He was one of the men sent to fly the first trip of the transcontinental air used in September, 1920, he was a pioneer in night flying, once going through



James F. Murray

three acts of telegraph pole in the dark without swerving a wing.

While building the mail, Murray studied law and was admitted to the Wyoming bar in 1921. He married Evelyn Jensen in 1922 and they have a boy, 11, and a girl, 7.

Jim Murray's last flight with the mail was on August 26, 1923, and he shortly thereafter joined Boeing Aircraft as their Washington representative, and for the past ten years, vice-president. Although he already had more than a semi-strenuous job in this capacity, the Aeronautical Chamber of Commerce persuaded him to accept the presidency last February. He has brought renewed life to this organization and is fast rebuilding it into the vigorous body that it should be.

J. J. H. Foxstun is the newly appointed publicity manager and assistant to the vice-president of sales for Sperry Gyroscope Company. He was formerly in charge of publicity for the Commercial National Radio System in the United States.

Frank A. Babbitt, who has been in charge of the Radio-Teletype Center of the Aircraft Accessories Corp., has been named Radio regional manager. He was earlier affiliated with General Electric Co. in the radio, television, and electronic divisions.

T. Chas. Ross, president of Ryan Aeronautical Co., and assistant managing director, has been elected to the board of directors of the United States National Bank, San Diego, Calif.

Mervin Mason, assistant industrial relations director for the Fort Worth division of Consolidated Value Air-

craft, has assumed new duties at Allentown, Pa., as industrial relations director, to succeed Leroy Brown, resigned. Before joining Consolidated Value at San Diego, Mason was personnel director at the Ryan Aeronautical Co. During the last war he was a naval aircraft mechanic at the Great Lakes Naval Training Station.

Joseph F. Ames has been appointed personnel director of Chicago & Southern Air Lines. He was formerly with the Smaller War Plants Corp. and the WPB, before that regional manager of the Chevrolet Division, General Motors Corp., in Memphis, and with the Commercial Credit Corp.



SPANGARD VISITS CURTIS-WRIGHT:

Banette E. Wright, center, vice-president of Curtis-Wright Corp., describes the exploits of the P-40 Warhawk to Gen. James Spangard, right, Spanish military envoy, during a visit to the company's Buffalo plant. Looking on is Lt. Col. Joseph Rodriguez, U. S. Army officer who accompanied the envoy. Spangard was stationed in Berlin for eight years before the war

"V" Loan Financing Plan Gains Favor in Industry

Convair, Bendix, Lockheed-Vega, Bell and Cessna report negotiations, with other firms pending.

By ROGER WILCO

The policy of V loan financing is finding widespread application throughout the aircraft manufacturing industry.

Consolidated-Vulcan—Outstanding was the arrangement for a \$280,000 V loan by Consolidated-Vulcan Aircraft with a group of 125 banks. Only \$40,000,000 of the loan is reported as being used at the present time. It is believed, however, that the company is looking forward to the period of contract termination so that it may have the funds to carry through during the transition period.

Additional Loans—A number of other aviation companies have also taken out substantial loans. Bendix, for example, has a \$150,000,000 credit. Lockheed Aircraft and its Vega subsidiary have a \$300,000,000 loan and Bell Aircraft has one for \$60,000,000.

Convair Aircraft, which has a \$38,000,000 working loan, has reduced its loan to \$15,000,000 and another out of \$5,000,000 is indicated. Aviation Corp. and two of its affiliated units are understood to have secured V loan for a total of \$16,000,000 with a group of banks. Piper Aircraft is also reported with a \$2,000,000 credit. In addition to these companies, there are many others in the aviation industry reporting to this type of financing.

Advantages—The popularity of the V loan is many-sided. These loans carry a government guarantee against loss and were introduced to stimulate war production. In March, 1945, the President, acting under authority derived from the first War Powers Act passed in 1941, issued an executive order which made this type of financing possible. As a direct result, Regulation V was issued by the Board of Governors of the Federal Reserve System to control the operation of this form of financing.

No Limit—Among other provisions, the regulation facilitates guaranteed loans covering contracts re-

ceived from the War and Navy Departments and the Maritime Commission. In effect, the commercial banks make the loan but are guaranteed, usually about 50 percent, through the Federal Reserve Banks. There is no limit as to the size of the loans that can be made. For instance, General Motors Corp. has a loan agreement covering a billion dollars. While some of this credit has been drawn down as yet, the company is probably preparing for future contingencies.

Rate Fixed—The maximum interest rate has been fixed at 5 percent annually. Usually, however, the rate is much lower. Consolidated-Vulcan will pay 3 percent annual interest on the funds used and 15 percent on the unused portion.

Cash Advances—These loans do not provide cash advances being made by the War and Navy Departments to contractors. However, it is not generally realized that the services usually charge interest at a minimum rate of 3 1/2 percent per annum on cash advances. On this basis, it may be found more desirable to have an established line of credit constantly available rather than be dependent upon the time-consuming process of securing advances.

Paid in Advance—Commercial banks can advance the entire risk of these loans if they are so inclined. In fact, the more of the loan that remains unadvanced, the greater the profit. Regulation V provides for a grade of advance of from one-third to a percentage of interest payable by the borrower—which the commercial bank must turn over to the guarantor agency in consideration for the assumption of the risk involved. However, most banks prefer to "share" that risk with the government and are delighted to pay the small premium for this insurance at times.

Production Restricted—Most loans

are made for a period that adequately covers the producer for the time required to complete his contracts. In other words, if a certain aircraft contract is projected to June 30, 1945, the loan agreement will run for the same period. This is a very important provision and will be highly advantageous in the event of sudden contract termination. Among other things, the contractor in that event will be able to obtain loans on any future investment and will not necessarily be stuck with unwanted materials. Working capital will thus become readily available.

Safety Valve—The V loan is nothing more than a safety valve against abrupt contract termination and can greatly facilitate the liquidation of inventories and prevent the restrictions surrounding company assets during any extended adjustment period.

SEC Reports Stock Sales by Officers

Aircraft and airline officials file records of transactions.

Aviation securities sold on balance by company officials during June are revealed in the tabulation of security transactions as released by the Securities & Exchange Commission.

Pen-Consolid—Prominent among the selling group were 1,000 shares of Pen-Consolidated Aircraft, common stock sold by John W. Dwyer, a director of the company and a New York banker. This official retained 1,800 shares.

Western Air—W. A. Culler, president of Western Air Lines, liquidated 850 shares of stock, retaining 193,815 shares or about 46 percent of the company's total stock. L. H. Dwyer, Jr., an officer of the same carrier, disposed of 500 shares, leaving a balance of 2,390 shares owned.

Pan American—A director of Pan American Airways, Robert Lehman, sold 600 shares, retaining 2,930. A late report disclosed William Stern, a director of Northwest Airlines, as selling 100 shares of that company in April, but holding a balance of 125 shares.

American—Also reported in the sale of a total of 1,500 shares of American Airlines common stock was J. H. Henson, a director of the company. On March 12, 1945, the Civil Aeronautics Board issued its decision ordering retroactive and reduced mail compensation for American Airlines. As a result, a sharp break occurred in

the price of American common. The SEC report discloses that Mr. Henson disposed of 1,500 shares from March 2 to 9. At last reports, Mr. Carter retained 3,390 shares.

Coleman-Center—In the selling group, Raymond Coleman, president of Coleman Airlines, acquired 4,200 shares of his company's stock during June to increase his total holdings to 32,318 shares.

Also on the buying side, John R. Longmire, a director of Chicago & Southern, through a partnership, acquired 1,300 shares of that company's voting trust certificates for the common during May. In addition to this purchase, Mr. Longmire, 50, Lewis investment banker, acquired holder of 3,077 shares of the same issue. Further, through the partnership and individually, Mr. Longmire controls a total of 11,245 stock warrants on the common stock.

Sale—The little activity in aircraft was mostly on the sell side. S. M. Fairchild disposed of 320 shares of Fairchild Aircraft during June, leaving a balance of \$1,299.

Major Airlines Report Big Gains In Revenues and Traffic Over '42

American, United, TWA, Braniff announce figures for first half, with others revealing data for varying periods.

Three of the nation's "Big Four" airlines, citing figures on first-half operations, report heavy gains, and other carriers announced new records.

American Airlines—Out of a business of more than \$15,000,000 for the first six months of this year, that carrier announced a net profit after taxes of \$1,254,018. For the first half of 1942, the profit was \$1,205,018.

United—United, United Air Lines placed its net income for the six months ended June 30 at \$2,154,000, compared with \$1,822,599 for the same period last year. The line reported total operating revenues for the first six months of this year of \$12,718,082.

United explained it was making no provision for excess-profits tax on its 1942 earnings, "since the company does not anticipate that it will be subject to such tax for 1943 under existing laws." Application of the effective excess-profits tax rate added would reduce net income to \$60,135 for the six-month period this year.

TWA—Transcontinental & West-

A detailed report shows John J. Daly, director of the Republic Aircraft, selling 3,800 shares in April, and 1,500 more in May, retaining a balance of 23,714 shares.

Reports show that Courtland S. Gross, a director, received by Bequest or inheritance, 750 shares of Lockheed to bring his total holdings to 7,000 shares.

Days—On the purchasing side were Charles L. Beard of Bell Aircraft who bought 150 shares of his company to increase his holdings to 400 shares, and John H. Fossitt who acquired 300 shares of Bellanca Aircraft to make his total holdings 700 shares.

Brokers—While transactions in their own securities may be ineffective of new officials view the outlook for their respective companies, this may not always prove to be an absolute barometer. For example, equities sold for the purpose of raising personal funds for various purposes. Similarly, many officials believe it desirable as a matter of principle to acquire a greater stake in their own companies.

Airline Conversion Deal Completed

United's earnings amounted to \$1.01 per share for the six-month period, an advance of 95 cents in the first six months of 1942.

TWA's first half earnings this year were 78 cents a share, compared with 64 cents in the 1942 period. Operating revenue of \$15,252,659 reported for the first six months of this year by American Airlines (last year the figure was \$12,200,028) were made up of: passenger revenue, \$11,512,360; mail, \$2,087,021; express, \$1,200,752; other, \$245,184.

United's operating revenues for the first half of this year were \$12,718,082 (compared with \$10,435,018 for the same period a year ago), broken down as follows: passenger, \$9,943,891; mail, \$2,027,466; express, \$1,010,306; miscellaneous, \$345,822.

TWA showed operating revenues for the first half of 1942 of \$4,211,200 which was a 22 percent increase over the \$3,400,211 for the same period in 1941.

Airline Conversion Deal Completed

President Walker says 20,394 shares are converted, 125 also released.

Randolph C. Walker, president of Aircraft Accessories Corp., announced that out of 21,519 shares of convertible preferred stock which he held as a stockholder for re-deemption, 125 were converted into 125 shares turned in at the redemption price of \$9.90 per share, plus accrued unpaid dividends.

The corporation operates plants in Kansas, Ohio, Kentucky, Idaho, and Burbank, Calif., and has aircraft repair equipment and hydraulic systems.

Northeast Files SEC Stock Statement

A registration statement on 300,000 additional common shares of Northeast Airlines, of \$1 per value, was filed by the company with the Securities and Exchange Commission. The shares are to be offered by the Lee Huggins Corp. and other interests, subject to an offering to present shareholders at rates of conversion of new stock for these now held.

Route Terminal—The proposal here in Tulsa affiliated to Northeast to make Brant a major transcontinental and Trans-Allegheny terminal and expand to New York for its Southern terminal.

Service Begins at Home

THE AIR TRANSPORT INDUSTRY at the moment is enjoying unbounded public confidence in the future of scheduled flying. The doarest observers admit that the long-time prospects for the airlines are good. Railroad, bus and truck operators think so too. So the public now has little reason to doubt what it reads.

Consequently, every foreign application that is tested into the docket section of the Civil Aeronautics Board is considered significant and gets a big hand from the popular press. Fitting a plane for a route to Moscow, Hankow or somewhere in India has become, overnight, the industry's sure-fire headline maker.

Occasionally a local moving van operator will think up a new combination of flying machine and a homely commodity to move in it, and win national newspaper notice. But the biggest headlines and the longest editorials spring from mention of serving crises on the other side of the globe.

We have reached the point where every self-respecting line feels it must make known its fondest global ambitions for the post-war age or suffer loss of prestige.

This "keeping up with the Joneses" could hardly be objectionable as long as the only costs were for attorneys' fees and liberal supplies of paper. The danger is that public confidence of the present airlines will be undermined.

Because the folks in Wichita or any number of other present or potential airline stops eventually will learn that all these foreign applications actually mean nothing. Realistic people in the industry and government know it now. CAB has let it be known that seniority of applications for routes, domestic or foreign, will not be an element in awarding route rights.

THE ADMINISTRATION and its State Department have not formed even a tentative policy on international air routes. The war must be won before any definite results are possible. Then there will be delicate and complicated negotiations at the peace table. A world air conference may have to be called. And before service starts on a permanent basis there will be detailed discussions with the individual nations seeking reciprocal air rights.

Nor should the public be led to believe that the morning after the Armistice the world will break out with an interlacing of air routes offering service on the hour. Remember that about a year ago it was told in a wave of enthusiasm that we would have great eight-engine cargo planes helping win the war this year or next. It knows now that these ships are perhaps possible, but not soon. But it still doesn't realize that we are not going to have airlines flying in the expected manner across the northern wastes to Moscow and Siberia or crisscrossing the Pacific on non-stop jumps of fantastic length for a long time after the war ends.

THERE IS A LURKING CONCERN among realistic people in Washington that the current emphasis on Shoup-in may back-fire on the industry. Once the war is over the average citizen and business man may lose his present high interest in romantic geographical place names and settle down again to earning his living in the home town.

This suggestion does not ignore the fact that legitimate foreign operations will expand at a rapid rate in the post-war decade. But there won't be room for every airline with foreign aspirations.

When this is discovered, the industry may find that during the cream-puff era of mass applications either lesser (or bigger) fellows have been at realistic work. The railroad, truck and bus lines which have been shuttling back and forth through the average citizen's home town for countless years may come up with thorough market surveys and complicated but accurate traffic flow charts. These may show that the industrious newcomers are ready, willing and able to settle down to the everyday job of flying Mr. Citizen and his mail and express with economic efficiency from the home town to anywhere else in our own country. Strong public support for these realists could hardly be a surprise to the lofty-minded airlines which may be compelled to turn back to their own trade territories. They may find others have taken the initiative for concentrated service in the areas the airlines pondered.

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ROBERT H. WOOD



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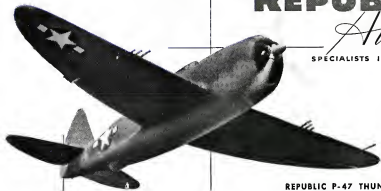
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